

REMARKS

Claims 1-18 are canceled herein and claims 19-29 are added.

* In the Final Office Action of 03/04/03, the Examiner withdrew from consideration as being directed to a non-elected invention, the newly submitted claim 18 of the Reply of Office Action 05/07/02, and indicated –for a complete reply- other appropriate action (37 CFR 1.144 – MPEP 821.01).

According with the proposal of the Examiner, we re-present in this Divisional Application the independent claim 26, claiming the subject matter of an independently varying discharging volumes mechanism, as disclosed in the USPTO application 02/04/00, page 18 lines 8 to 28.

* In this Divisional Application, we are also re-presenting other independent claims referred to other subject matters, formerly claimed in the USPTO application 02/04/00 as dependent claims.

* Besides, in this Divisional Application we re-present the subject matter “direct attaching of the outlet ports of the blood chambers with the corresponding arteries”.

In the First Office Action of 09/20/01, the Examiner suggested to use the expression “for directly attaching”, when referring to the dependent claim 7.

In the reply to this First Office Action, we included this suggested expression. We stated “means for directly attaching” referring to a surgical procedure. The well-known technical procedure called “double surget”, is a way, means or manner for directly attaching two surgical structures. We referred to the way to directly join the outlet ports of the two blood chambers with their corresponding arteries. We did not referred to any interconnecting structure.

About the subject matter of the outlet ports for directly attaching to the corresponding arteries, and referring to these important hemodynamic and hematological advantages, in page 6 line 30, to page 7 line 2, we stated: “ This characteristic provides the instant invention with the

great advantage of being directly connected with the vascular systems through native vessels which respond to increased blood flow with the vasodilatation autonomous reflex response.” In the detailed description, in page 12 lines 1 and 2 we stated: “... the posterior outlet port 10 of the right blood chamber 1 is located and connected directly to the pulmonary circulatory circuit.” Further, in page 14 lines 2 and 3 we stated: “... until reaching and connecting directly to the neoentrance of the pulmonary circulatory system...”.

In the background of the invention we stated the disadvantages of the rigid prosthetic tubes of the prior art. In page 2, lines 24 to 26, we stated: “The aforementioned artificial devices present haemostatic complications such as bleeding, occurring because the blood has to go through long circuits of rigid prosthetic tubes with many stitches at each end.”. And following lines, in the same page 2, lines 26 to 28 : “These artificial prosthetic tubes do not respond to a need to increase the blood flow rate like native vessels do in reflex mode, i.e., by greatly increasing their diameter.”. And we went on specifying the hemodynamic and haematological technical problems of the prior art in the same page 2, lines 28 to 30 : “This deficiency causes a larger increase in blood pressure which further stresses the above mentioned stitches and causes the present generation Total Artificial Hearts to operate under more stringent conditions.”

In the USPTO Application No. 4,863,461, Jarvik teaches the connection of the outlet sides of his artificial ventricles with outlet connectors 16A and 16B. Jarvik teaches an outlet connector 16A for connecting the outlet side of his artificial right ventricle with the patient’s pulmonary artery as he states, in col. 4, lines 3 and 4: “...its outlet side, is connected by means of a connector 16A to the patient’s pulmonary artery 18.” The outlet connector 16A for the outlet side of Jarvik’s right artificial ventricle is shown in Fig. 1. This Fig. 1 shows prosthetic material further away of the level of the artificial valve, constituting also this prosthetic material 16A the wall of the patient’s pulmonary artery. Likewise, in this USPTO Application No. 4,863,461, Jarvik teaches an outlet connector 16B for connecting the outlet side of his artificial left ventricle with the patient’s aorta, as he stated in col. 4 lines 7 to 9: “...its outlet side by an outlet connector 16B connected to the patient’s aorta 20.” The outlet connector 16B for the outlet side of Jarvik’s left artificial ventricle is shown in Fig. 1. In Fig. 1, too, the prosthetic material 16B,

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Then, we re-draft the subject matter of the "directly attaching" in this Divisional Application as Independent claim 19, removing the word "means". We will keep the suggestion of the examiner "for directly attaching", whenever we refer to the direct joint of the outlet port with its corresponding artery.

Accordingly, Applicant respectfully requests that the rejection based on Jarvik should be withdrawn.

Respectfully submitted,



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